Postoperative Opioid Use Following Elective Endonasal Skull Base Surgery: A Retrospective Analysis

Authors: Gregory J. Watson, BA[a], James W. Manor, MS[b], Nevan D. McCabe, MS[b], and Anne E. Getz, MD[b]

a) University of Colorado School of Medicine at Anschutz Medical Campus
13001 E 17th Pl, Aurora, CO 80045

b) Department of Otolaryngology, University of Colorado
12631 E. 17th Ave, B205, Aurora, Colorado 80045. P: 303-724-1950 F: 303-724-1951

Abstract:

Background: Following Endonasal Skull Base Surgery (ESBS), clear postoperative analgesic protocols do not exist. We sought to define opioid prescription patterns at our tertiary institution and identify demographic factors, comorbidities, and surgical complications associated with increased opioid prescribing patterns following ESBS.

Methods: A retrospective review of 500 patients who underwent ESBS between October 2015 and November 2020 was conducted. Demographics, comorbidities, and intraoperative complications were analyzed. Oral Morphine Milligram Equivalents (MMEs) and postoperative opioid refill rates were calculated from Electronic Medical Record data. Odds Ratio and Chi-Squared analyses were performed to identify patient characteristics associated with increased postoperative opioid prescription rates.

Results: Data from 500 patients was analyzed. Current smoking status demonstrated the greatest risk for refilling an opioid prescription (OR 2.18, 95% CI 1.08-4.42). Mood disorders (OR 1.99, 95% CI 1.01-3.89), chronic headache or migraine (OR 1.67, 95% CI 1.05-2.69), and intraoperative CSF leak (OR 1.93, 95% 1.22-3.05) were also associated with increased risk for opioid prescription refill, while age was inversely

correlated. No significant association was found with sex, surgical approach, pathology, history of chronic pain, or Cushing' disease.

Conclusion: Smoking status, intraoperative CSF leak, age less than 50, history of mood disorders, and chronic headache or migraine were all associated with increased rates of opioid prescription refills in patients undergoing ESBS. Understanding these patient factors may help inform patient counseling on postoperative pain expectations and improve analgesic protocols to reduce opioid diversion and misuse.